

What is claimed is:

1. A network system comprising:

a network interface connected to a first network;

a primary switch connected to the network interface;

a secondary switch connected to the network interface; and

a second network connected to both the primary switch and the secondary switch;

wherein packet-switched data is transferred between the network interface and the second network across the primary switch if the primary switch is operable, and the packet-switched data is transferred between the network interface and the second network across the secondary switch if the primary switch is inoperable.

2. The network system of claim 1 further comprising a selection switch connected to the network interface, the primary switch, and the secondary switch, wherein the selection switch enables the packet-switched data to be transferred across the primary switch and the secondary switch.
3. The network system of claim 2 further comprising a route server connected to the selection switch, wherein the route server controls the functioning of the selection switch.
4. The network system of claim 1 further comprising a controller connected to the primary switch that determines if the primary switch is operable via a heartbeat mechanism.

5. The network system of claim 4, wherein the controller deactivates the primary switch if the primary switch is inoperable.
6. The network system of claim 1 further comprising a first link connecting the primary switch to the second network.
7. The network system of claim 6 wherein the packet-switched data is transferred across the primary switch if the first link is operable, and the packet-switched data is transferred across the secondary switch if the first link is inoperable.
8. The network system of claim 6, wherein the first link comprises optical fiber.
9. The network system of claim 8, wherein a laser utilized for transmitting the packet-switched data along the first link is deactivated if at least one of the primary switch and first link are inoperable.
10. The network system of claim 8, wherein a laser utilized for transmitting the packet-switched data along the first link is explicitly deactivated if maintenance operations are to be performed on at least one of the primary switch and first link.
11. The network system of claim 1, wherein the network interface comprises a digital signal processing card for converting between circuit-switched data and the packet-switched data.
12. The network system of claim 1, wherein the packet-switched data comprises Internet protocol packets.
13. The network system of claim 1, wherein the second network comprises a primary router.
14. The network system of claim 13, wherein the second network further comprises a secondary router, the packet-switched data is transferred between the network

interface and the primary router if the primary router is operable, and the packet-switched data is transferred between the network interface and the secondary router if the primary router is inoperable.

15. A method for transferring packet-switched data comprising:

determining if a primary switch and a first link are operable;

transferring packet-switched data across the primary switch if the primary switch and the first link are operable; and

transferring packet-switched data across a secondary switch if at least one of the primary switch and the first link are inoperable.

16. The method of claim 15 further comprising deactivating the primary switch and activating the secondary switch if at least one of the primary switch and the first link are inoperable.

17. The method of claim 16, wherein the step of deactivating the primary switch comprises terminating fiber optic communications between the primary switch and a network.

18. The method of claim 15 further comprising determining if a primary router is operable.

19. The method of claim 18 further comprising transferring the packet-switched data between a network interface and the primary router if the primary router is operable.

20. The method of claim 18 further comprising transferring the packet-switched data between a network interface and a secondary router if the primary router is inoperable.

21. The method of claim 15 further comprising converting between circuit-switched data and the packet-switched data.
22. The method of claim 15, wherein the packet-switched data comprises Internet protocol packets.
23. The method of claim 15, wherein the step of determining if the primary switch and the first link are operable further comprises monitoring the primary switch via a heartbeat mechanism.
24. A network assembly comprising:
- a digital signal processing card for converting between circuit-switched data and Internet protocol packets;
 - a primary switch connected to the digital signal processing card;
 - a secondary switch connected to the digital signal processing card;
 - a selection switch connected to the digital signal processing card, the primary switch and the secondary switch, wherein the selection switch enables the Internet protocol packets to be transferred across the primary switch if the primary switch is operable, and across the secondary switch if the primary switch is inoperable;
 - a route server connected to the selection switch, wherein the route server controls the functioning of the selection switch; and
 - a controller connected to the primary switch, wherein the controller monitors the primary switch and deactivates the primary switch if the primary switch is inoperable.

25. The network device of claim 24, wherein an Internet protocol network is connected to both the primary switch and the secondary switch, and the Internet protocol network includes a primary router and a secondary router.
26. The network device of claim 25, wherein the Internet protocol packets are transferred between the digital signal processing card and the primary router if the primary router is operable, and the Internet protocol packets are transferred between the digital signal processing card and the secondary router if the primary router is inoperable.
27. The network device of claim 24, wherein the controller monitors the primary switch via a heartbeat mechanism.